

ACC NR: AT6030939

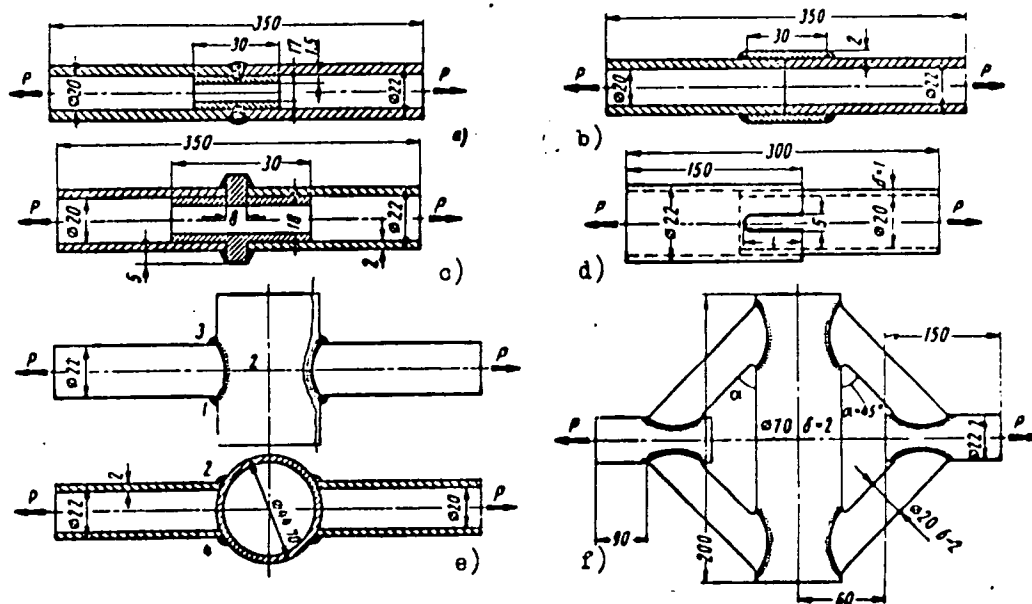


Fig. 1. Studied types of welded joints of thin-walled pipes.  
 a - butt-welded with an inner supplementary ring (type 'a'); b -

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butt-welded with an outer bushing (type 2); c - butt-welded with a separator gasket (type 3); d - telescoping joint with perforated, two-sided flange welds (type 4); e - pipe joint wall-to-wall (type 5); f - planar tubular truss with braces attached at an angle of 45 degrees (type 6)

stresses by high drawing lowers the strength of the joint by a factor of 2. Annular nonfusion lowers the durability of the joint more sharply in butt-welded pipes than in planar specimens. Orig. art. has: 16 figures.

SUB CODE: 11, 13/ SUBM DATE: 11Mar66/ ORIG REF: 007

Card 3/3

ACC NR: AP7002866

SOURCE CODE: UR/0149/66/000/006/0139/0141

AUTHORS: Stepanova, M. V.; Makarov, I. I.

ORG: Moscow Institute for Steel and Alloys. Department of Nonferrous, Rare, and Rare Earth Metals (Moskovskiy institut stali i splavov. Kafedra metallovedeniya tsvetnykh, redkikh i redkozemel'nykh metallov)

TITLE: The influence of cold deformation on the onset of recrystallization temperature in aging metals

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1966, 139-141

TOPIC TAGS: alloy, aluminum alloy, copper alloy, zirconium containing alloy, metal recrystallization/ D16 alloy, AV alloy

ABSTRACT: The effect of cold deformation of alloys D16 and AV and of two Cu-Zr bronzes with 0.09 and 0.26% Zr, respectively, on the recrystallization temperature of these alloys was studied. The study supplements the results of M. V. Stepanova and V. Ye. Mogilevskaya (Izv. VUZ, Tsvetnaya metallurgiya, No. 6, 1963). The metal specimens were hot rolled, annealed, and then cold rolled. The recrystallization temperature (fixed by x-ray techniques) was determined as a function of the degree of cold deformation. The experimental results are shown graphically (see Fig. 1). It is concluded that the formation of a supersaturated solid solution, prior to cold deformation, and its decomposition during recrystallization annealing may be the cause

Card 1/2

UDC: 620.181

ACC NR: AP7002866

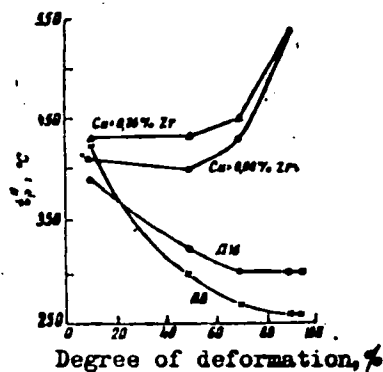


Fig. 1. Dependence of the recrystallization temperature on the degree of cold deformation during cold rolling

for the observed increase in the recrystallization temperature as a result of cold deformation. Orig. art. has: 1 table and 3 graphs.

SUB CODE: 11/ SUBM DATE: 29Sep65/ ORIG REF: 006

Card 2/2

MIROSHNICHENKO, Viktor Savvich, kand. ekon. nauk; KHARAKHASH'YAN, G.M.,  
nauchnyy red.; MAKAROV, I.I., red.; NAZAROVA, A.S., tekhn.  
red.

[Toward new goals; a new stage in the development of the world-  
wide socialist system] Na novykh rubezhakh; novyi etap razvitiia  
mirovoi sotsialisticheskoi sistemy. Moskva, Izd-vo "Znanie,"  
1962. 29 p. (Novoe v zhizni, nauke, tekhnike. III Seriya:  
Ekonomika, no.8) (MIRA 15:5)  
(Communist countries--Economic conditions)

KAS'YANENKO, Vasilii Ignat'yevich, and. istor. nauk; MAKAROV, I.I.,  
red.; RAKITIN, I.T., tekhn. red.

[Great deed of the party and the people; how the Soviet people  
achieved the technical and economic independence of the  
U.S.S.R.] Velikiy podvig partii i naroda; zavoevanie sovet-  
skim narodom tekhniko-ekonomicheskoi samostoitel'nosti SSSR.  
Moskva, Izd-vo "Znanie," 1962. 46 p. (Novoe v zhizni, nauke,  
tekhnike. I Seriya: Istorii, no.2) (MIRA 15:4)  
(Russia—Economic conditions)

MAKAROV, I.I., kand. tekhn. nauk

Results of field observations  
thermal electric power

**MAKAROV, I.L. [translator]**

[Aircraft template development] Izgotovlenie shablonov v samoletostroenii. Sokr. avtorisovannyi perevod s angliiskogo I.L.Makarova. Moskva, Oborongiz, 1946. 107 p. (MLBA 7:11)

1. Aero Publishers, inc.  
(Airplanes--Design and construction)



~~MAKAROV, I. I.~~

Raising waterfowl is an important measure for increasing meat production in White Russia. Ptitsevodstvo 8 no.3:17-19 Mr '98.

(MIRA 11:2)

1. Starshiy zootekhnik-inspektor Ministerstva sel'skogo khozyaystva BSSR.

(White Russia--Ducks) (White Russia--Geese)

MAKAROV, I.L.; ZHILINKO, M.I.

We cool eggs with the first day. Ptitsevodstvo 9 no.10:20  
0 '59. (MIRA 13:2)

1. Direktor Minskoy inkubatorno-ptitsevodcheskoy stantsii (for  
Makarov). 2. Zaveduyushchiy tsekhom inkubatsii Minskoy  
inkubatorno ptitsevodcheskoy stantsii (for Zhilinko).  
(Incubation)

MAKAROV, I.M.

~~Selection of geometric dimensions for magnetic conductors and~~  
Selection of geometric dimensions for magnetic conductors and  
for electrodynamic coupling diagrams. Avtom. i telem. 17 no.  
10:897-909 0 '56. (MIRA 9:11)

(Servomechanisms)

AUTHOR: MAKAROV, I.M. (Moscow) PA - 2834  
 TITLE: The Analytical Treatment of the Stability Problem in an Electro-mechanical Transforming Device. (Analiticheskoye issledovaniye ustoychivosti dvizheniya elektromekhanicheskogo preobrazuyushchego ustroystva, Russian)  
 PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol 18, Nr 4, pp 315 - 323 (U.S.S.R.)  
 Received: 5 / 1957 Reviewed: 6 / 1957  
 ABSTRACT: One of those devices is investigated by which the parallel current voltage of an electron model is transformed into an angle of rotation. The equations for the motions of the transformer are derived and the stability problem is solved. The device is an electro-mechanical observation system driven by an electrodynamic coupling (EDC). The basic scheme and the elements of the device are described individually. There then follows a description of their mode of operation and an investigation of the equations of motion. The most important characteristic of the system under observation is the exactitude of the reproduction of control. Exactitude depends on the amount of the amplification coefficient. A too far-reaching increase of the latter may, however, lead to a loss of stability. By means of the methods of the quality theory of differential equations and by the application of the direct method developed by Lyapunov it was possible to obtain the desired results. It is

Card 1/2

PA - 2834

The Analytical Treatment of the Stability Problem in an Electro-mechanical Transforming Device.

proved that the inequation  $8bc > a$  ( $a$ ,  $b$ , and  $c$  are the constants of the plane) is the only condition that, if satisfied, secures the stability of the investigated device in the case of any fluctuations  $x_0$  and sufficiently small fluctuations  $y_0$ ,  $z_0$ . With a given time constant  $T$  of the control winding this condition makes it possible to select the amplification coefficients  $k$  and  $m$  of the back-couplings of the system under investigation.  
(8 illustrations and 5 citations from Slav publications)

ASSOCIATION: Not given

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 2/2

**AUTHORS:** Makarov, I. M. Shumilovskiy, N. N. 103-19-5-13/14

**TITLE:** Transactions of the National Conference on Problems of Production Automation in Bucharest (Natsional'naya konferentsiya v bukhareste po voprosam avtomatizatsii proizvodstva)

**PERIODICAL:** Avtomatika i Telemekhanika, 1958 Vol. 19, No 5, pp. 491-492 (USSR)

**ABSTRACT:** From June 5 to 8, 1957 the second national conference on problems of production automation was held in Bucharest. In the conference participated: scientists and automation experts from Bulgaria, Hungary, Poland, Rumania, the CSR, the USSR and Yugoslavia, thus A. Bolevskiy, Corresponding Member of the Bulgarian Academy of Sciences, Professor D. Mitrovich (Yugoslavia), Doctor I. Benesh (CSR), Doctor G. Vengzhin and Professor Lebson (Poland). 99 lectures were held. Of those the representatives of Rumania held 9 lectures, of the CSR - 2, of Hungary - 2, of Poland - 1, of the USSR - 2 and of Yugoslavia - 1 lecture. Professor N. N. Shumilovskiy

Card 1/5

Transactions of the National Conference on  
Problems of Production Automation in Bucharest

03-19-5-13/14

and Engineer I. M. Makarov, the coordinators of the IAT AS USSR, belonged to the delegation of the USSR. The Roumanian Academy of Sciences does not possess any institute for automation, but a Commission for Automation presided over by I. S. Georgiu, Member of the Academy. The Commission has two scientific secretaries. The representatives of the institutes of the Academy and the branches of economy of the universities, factories, ministries and of the State Planning Authority also belong to it. The conference was called under the direction of this Commission. The conference was opened by I. S. Georgiu, Member of the Academy. Then Professor N. N. Shumilovskiy spoke some words of welcome. In the plenary session Professor N. N. Shumilovskiy, Doctor I. Benesh and Professor D. Mitrovich spoke on the state of automation and testing technique in their respective countries in the individual branches of industry. The Roumanian delegates G. K. Moisil, Member of the Academy, Professor K. Penescu, D. Daneker, Engineer M. Maresh, Engineer A. Aramensku, Corresponding Member of the

Card 2/5

Transactions of the National Conference on  
Problems of Production Automation in Bucharest

103-19-5-13/14

Roumanian Academy of Sciences, and others spoke on the problems of automation in the individual branches of industry of Roumania on problems of terminology in automation, as well as on the problems of the training of experts for the automation of industry. The further work of the conference was done in 3 sections. In the first section spoke: M. Marinescu, Corresponding Member of the Roumanian Academy of Sciences and G. Yankulescu, Engineer on "Synchronous Motors and Motors With Alternating Inductivity as Servomechanisms With Proportional Control". Engineer V. Popov on "Contribution to the Simplification of the Conditions of Stability by A. I. Lur'ye", Engineer D. Damsker on "Construction of the Transition Process in Systems With Nonlinear Controllers". Engineer K. Vazak on "Active Correction Links". Engineer K. Penescu on "Method for Simplifying the Analysis of Continuous Linear Systems of Automatic Control". Engineer N. Shtefanescu on "A Method for computing Intermittent Systems of automatic Control".

Card 3/5



Transactions of the National Conference on  
Problems of Production Automation in Bucharest

103-19 5 13/ 4

G. Moisil, Member of the Academy of Roumanian Academy of Sciences, on "The Characteristic Equation of the Trigger-Action Relay". The following foreign delegater spoke in the first section: Doctor S. Vengzhin (Poland) on "Some Problems of the Theory of Nonlinear Systems of Automatic Control"; Doctor I. Benesh (CSR) on "Statistical Method for Investigating the Dynamics of Control Systems"; Engineer L. Yanoki (Hungary) on "A New Method for Determining the Characteristics of Electric Waves With One Phase". In the second section 27 lectures were held: Engineer Ya. Balash on "Economic Considerations in the Automation of Capitalist Countries"; I. Teodorov and I. Lemn on "Automation in the Countries of the Socialist Camp"; Engineer V. Tom on "Electron Counters of the Institute for Nuclear Physics of the Roumanian Academy of Sciences"; Engineer M. Steru on "Electrical Measurement of Moisture in Materials"; Engineer N. Konstantinesku on "The Projection of a Radio-Controlled System in Application to Movable Objects With High Speed"; Engineer S. Shekhter on "The Problem Concerning the Method of Designing the"

Card 4/5

Transactions of the National Conference on  
Problems of Production Automation in Bucharest

103-19-5-13/14

Operational Amplifier for Electron Models", Engineer  
I. M. Makarov (USSR) on "The Selection of the Optimum  
Characteristics of Electrodynanic Couplings for systems  
of Automatic Control". In the third section 30 lectures  
were held. These were devoted to the automation of  
Roumania's national economy. After the termination  
of the conference the newly built mineral-oil refinery  
in Ploiesti, the Institute for Power Engineering, the  
Institute for Electrical Engineering, the Military-  
-Technical Academy in Bucharest and the chemical factory  
for the production of superphosphate and sulfuric acid  
were visited.

AVAILABLE: Library of Congress

1. Industrial production--Automation 2. Conferences--Pro-  
duction Automation--Bucharest

Card 5/5

MAKAROV, I. M., Cand of Tech Sci -- (diss) "Converting Instruments for Model-Scale Operations," Moscow, 1959, 16 pp (Institute of Automatics and Telemechanics, Acad of Sci USSR) (KL, 1-60, 122)

MAKAROV, I.M.

Mechanisation of cleaning and degreasing (gas) cylinders. Khim.prom.  
no.1:46-47 Ja-F '54. (MLRA 7:4)  
(Cylinders)

MAKAROV, I.M.

Repair of condensers of low-pressure columns of the AK-12 separation  
block. Khim.prom. no.2:118-119 Mr '54. (MLRA 7:6)  
(Packed towers)

MAKAROV, I.M., inzh.

Calculating the depth of pile driving into sloping ground. Trans.  
strof. 13 no.12:58 D'63 (TIRA 17:7)

I.O. Makarov; 1891-1963, obituary. Vop. psikhol. 9 no.5:190 S-O '63.  
(MIRA 17:2)

*slipped*

MALYUTIN, A.V., kand. tekhn. nauk; MAKAROV, I.N., kand. tekhn. nauk

Overall mechanization and automation of a forge shop. Mekh. 1  
avtom. proizv. 19 no.4:1-7 Ap '65. (MIRA 18:6)



*N* L 9655-66 EWT(d)/EWT(1)/EWA(j)/EWT(m)/EWP(v)/EWP(j)/EWA(b)-2/EWP(k)/EWP(h)/

ACC NR: AP5028987

EWP(1)/EWA(c)

EO/EM

SOURCE CODE: UR/0118/65/000/009/0008/0009

AUTHOR: Gridnev, A. Ya. (Engineer); Makarov, I.N. (Candidate of technical sciences)

ORG: none

TITLE: A mechanized device for the preparation of highly toxic substances

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 9, 1965, 8-9

TOPIC TAGS: aqueous solution, material mixing, toxicology, remote control, chemical plant equipment, remote control system, cyanogen, metal coating, protective coating

ABSTRACT: Numerous galvanic coating operations utilize cyanogen solutions which are extremely toxic. To increase the productivity of such procedures making them at the same time completely safe, the machine building factory of Mosgorsovmarkhoz (mashinostroi-  
tel'nyy zavod Mosgorsovmarkhoza) developed an automated device for the preparation of highly toxic solutions shown in Fig. 1. Remote control equipment

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UDC 621.357.7.035.14-52

L 9655-66

ACC NR: AP5028987

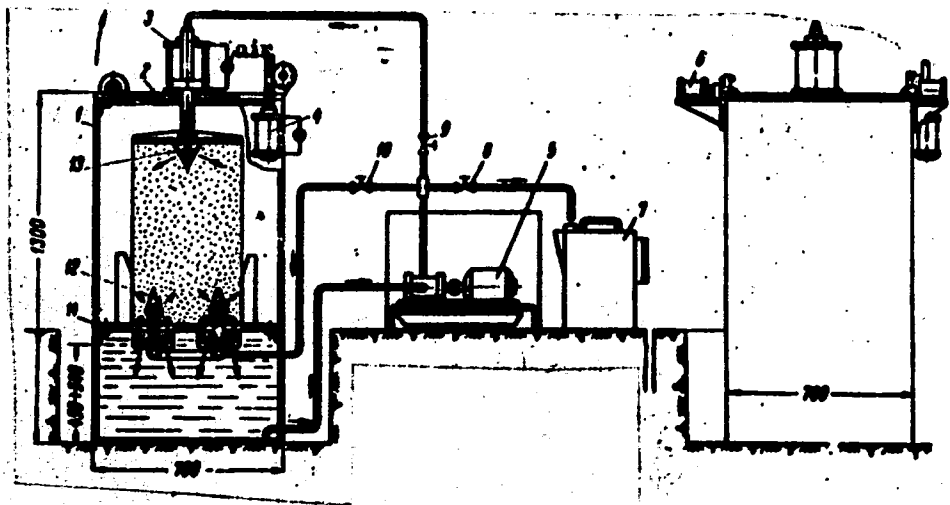


Figure 1. Scheme of the device for the preparation of toxic solutions.

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L 9655-66

ACC NR: AP5028987

1 - water-containing tank; 2 - hinged cover; 3, 4, 6 - pneumatic cylinders; 5 - solvent (water) pump; 7 - carrying can; 8, 9, 10 - valves; 11 - lower tank chamber; 12, 13 - prismatic knife-currets. Inside the tank 1 is the (initially) hermetically sealed salt container.

makes the cyanogen solution manufacturing process completely safe. Orig. art. has: 2 figures.

SUB CODE: 11, 13 / SUBM DATE: none

  
Card 8/3

MAKAROV, I. P.

Bee Culture-Equipment And Supplies

"Swarming box". Pchelovodstvo, 29, No. 5., 1952

9. Monthly List of Russian Accessions, Library of Congress, August 195<sup>2</sup>~~3~~, Uncl.

MAKAROV, I. P. Cand Agr Sci -- (diss) "Comparative effectiveness of various  
~~methods of autumn tillage~~ <sup>(of salubris)</sup> <sup>cultivation</sup> potatoes in the central ~~regions~~ <sup>regions</sup> of  
the nonchernozem belt." Mos, 1957. 21 pp (Mos Order of Lenin Agr Acad im  
K. A. Timiryazev), 110 copies (KL, 3-58, 98)

USSR/Cultivated plants - Potatoes, Vegetables, Melons.

11.

Abstr Jour : Rev. Russ. - Biol., No. 12, 1958, 44099

Inst : Moscow Agricultural Academy named K.M. Timiryazev

Author : Igarkov, I.I.

Title : Comparative Effectiveness of Different Kinds of Tillage of the Arable Layer Under the Plow in the Central Regions of the Non-Chernozem Belt.

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K.M. Timiryazeva, 1958, vyp. 20, 101-106.

Abstract : The two-year experiments at the Experimental Station for Field Cultivation of the Moscow Agricultural Academy established that on weed-free soils when organic-mineral mixtures are used, the loosening of the soil should be done with the plow without the moldboard to the depth of the tillable layer. On soils with a deep stratification

Card 1/2

MAKAROV, I. P. Cand. Physicomath. Sci.

Dissertation: "New Criteria of Stability According to Lyapunov in the Case of a Finite and Infinite Triangular Matrix." Moscow Order of Lenin State U. imeni M. V. Lomonosov, 11 Jun. 1947.

SO: Vechernyaya Moskva, Jun. 1947 (Project #17836)

USSR/Mathematics - Differential Equations  
Nonhomogeneous

11 Sep 49

"Conditions Governing the Tendency of the Solutions of an Infinite Nonhomogeneous System of Differential Equations Toward Zero," I. P. Mal'arov, 4 pp

"Dokl Ak Nauk SSSR" Vol LXVIII, No 2 1225-28

Considers system of differential equations  $\frac{dx_i}{dt} = p_{ik}(t)x_k$  (summed from  $k=1$  to  $n$ ),  $i=1, 2, \dots, n$ , where  $p_{ik}(t)$  is a continuous function of time  $t$ , starting from a certain moment of time  $t_1 > 1$ . Determines conditions which must be imposed on  $p_{ik}(t)$  so that all solutions  $x_i(t)$  tend toward zero as  $t \rightarrow \infty$ . 3/50247

USSR/Mathematics - Differential Equations (Contd)

11 Sep 49

of the systems will tend toward zero as  $t \rightarrow \infty$ . Submitted by Acad I. P. Petrovskiy 8 Aug 49.

3/50247



MAKAROV, I. P.

USSR/Mathematics - Stability of      Jan/Feb 52  
Liapunov

"New Criteria Governing Stability According to  
Liapunov (Lyapunov) in the Case of an Infinite  
Triangular Matrix," I. P. Makarov, Ryzan'

"Matemat. Sborn" Vol XXX (72), No 1, pp 53-58

Introduces a more rigid definition of stability  
for infinite systems, which requires not only  
arbitrary smallness of the modulus of each com-  
ponent but also arbitrary smallness of the sum

203744

USSR/Mathematics - Stability of      Jan/Feb 52  
Liapunov (Contd)

of the moduli of these components. Such a defi-  
nition is of greatest interest from the standpoint  
of its practical application. Considers triangular  
matrices with const and variable coeffs. Submitted  
3 May 51.

203744

MAKAROV, I.P., dotsent

Sign of convergence for a certain class of series. Uch.zap.  
RGPI 13:315-323 '56. (MIRA 12:8)  
(Convergence)

16(1)

PHASE I BOOK EXPLOITATION

SOV/1845

Makarov, Irinarkh Petrovich

Teoriya funktsiy deystvitel'nogo peremennogo; uchebnoye posobiye dlya pedagogicheskikh institutov (Theory of Functions of a Real Variable; a Textbook for Pedagogical Institutes) Moscow, Uchpedgiz, 1958. 174 p. 25,000 copies printed.

Ed. (Title page): I.Ya. Verchenko; Ed. (Inside book): L.G. Nemtsova; Tech. Eds.: A.F. Fedotova and N.N. Makhova.

PURPOSE: This book is intended as a textbook for students of pedagogical institutes.

COVERAGE: The author attempts to acquaint students with important mathematical concepts and problems which will be needed in their future work as teachers of mathematics. He presents the general set theory which he applies to the analysis of functions and continuous curves. The fundamentals of measure theory are given, especially a detailed presentation of Jordan's measure, which

Card 1/6

Theory of Functions of a Real (Cont.)

SOV/1845

he applies to concepts of an integral more extensive than the concept of the Riemann integral. After each chapter a number of problems for student exercises are given. The author thanks P.S. Novikov, Corresponding Member, Academy of Sciences, USSR; Professor N.V. Smirnov; Professor A.G. Pinsker; Ye.G. Shul'geyfer; Professor I.Ya. Verchenko; and coworkers of the Department of Mathematical Analysis of the Ryazanskiy gosudarstvennyy pedinstitut (Ryazan' State Pedagogical Institute), especially Docent A.A. Fridman, Aspirant V.F. Voronov, and Aspirant V.V. Potlov, for their help in producing the book. References appear in footnotes throughout the book.

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Theory of Functions of a Real (Cont.)

SOV/1845

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Theory of Functions of a Real (Cont.)

SOV/1845

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SOV/1845

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Theory of Functions of a Real (Cont.)

SOV/1845

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LK/ad  
7-10-59



AUTHOR: Makarov, I.P. SOV/42-13-3-39/41  
TITLE: Mathematical Life at Ryazan' (Matematicheskaya zhizn' Ryazani)  
PERIODICAL: Uspekhi matematicheskikh nauk, 1958, Vol 13, Nr 3, pp 249-250 (USSR)  
ABSTRACT: This is a report on the activity of the seminar on the qualitative theory of differential equations, founded in 1952 at the Ryazan' pedagogical institute. The seminar is in constant communication with the corresponding seminar of Professor V.V.Nemytskiy at Moscow. At the suggestion of the members of the seminar in 1956 the Ryazan' Physical-Mathematical Society was founded. During the time from April 17, 1956 to July 19, 1957 seven lectures on mathematical subjects have been given in the society.

Card 1/1

16.3400

S/044/62/000/003/026/092  
C111/C222

AUTHOR: Makarov, I. P.

TITLE: The stability tube for a system

PERIODICAL: Referativnyy zhurnal, Matematika, no. 3, 1962, 48,  
abstract 3B219. ("Uch. zap. Ryazansk. gos. ped. in-t", 1960,  
24, 93-103)

TEXT: The results of the dissertation by S. A. Samedova (MGU 1950)  
are applied to the system

$$\frac{dx_i}{dt} = f_i(t, x_1, \dots, x_n), \quad i = 1, \dots, n. \quad (1)$$

Let the solution curves  $x_i = \bar{x}_i(t)$  of the system  $f_i(t, x_1, \dots, x_n) = 0$ ,  
 $i = 1, \dots, n$  lie in the strip  $\bar{I}_1 : t_0 \leq t < \infty, c_1 \leq \bar{x}_1(t) \leq d_1$ .

Conditions are given under which the integral curves of the system (1)  
from a certain  $t$  on, lie in the interior or exterior of the topological  
product of the strips  $\bar{I}_1$  or the "widened strips"  $\bar{I}_1^* : t^* \leq t < \infty$ ,

$$c_i - \alpha_i \leq x_i(t) \leq d_i + \beta_i.$$

Card 1/2

JA

The stability tube for a system

S/044/62/000/003/026/092  
C111/C222

The fundamental assumptions are: 1) the matrix  $\left\| \frac{\partial f_i}{\partial x_k} \right\|$  is reducible to the diagonal form by certain transformations (adding one row (column) multiplied with a positive number to another), whereby the elements for fixed  $t, x_1, \dots, x_n$  have the same sign; 2)  $(x_i - \bar{x}_i)f_i \leq 0$  or  $(x_i - \bar{x}_i)f_i > 0$  everywhere except on the surfaces  $f_i = 0$ . ✓A

[Abstracter's note: Complete translation.]

Card 2/2

MAKAROV, Irinarkh Petrovich; VERCHENKO, I.Ya., prof., red.; TAL'SKIY,  
D.A., red.; GOROKHOVA, S.S., tekhn. red.

[Theory of functions of real variables] Teoriia funktsii deistvitel'-  
nogo peremennogo. 2. izd. Pod red. I.IA.Verchenko. Moskva, Vys-  
shaia shkola, 1962. 194 p. (MIRA 15:6)

(Functions of real variables)

POTOTSKIY, Mikhail Vladimirovich; MARGULIS, A.Ya., dots., retsenzent;  
SHOLASTER, N.N., dots., retsenzent; MAKAROV, I.P., dots.,  
retsenzent; SHABASHOV, T.K., retsenzent (Noginsk); FIKITINA,  
N.I., red.

[What is being studied in a mathematical analysis course]  
Chto izuchaetsia v kurse matematicheskogo analiza. Moskva,  
Prosveshchenie, 1965. 86 p. (MIRA 18:8)

MAKAROV, I.P.; KRASNOZHENOV, M.S.; OSTANIN, D.I.

Our methods for the maintenance of tracks with asbestos ballast.  
Put' i put. khoz. 7 no.5:18-19 '63. (MIRA 16:7)

1. Chleny Obshchestvennogo konstruktorskogo byuro Ishimskoy  
distantzii Sverdlovskoy dorogi.  
(Railroads---Track) (Ballast (Railroads))

I 48045-46 EMT(d)/EMT(m)/EAP(v)/E.P(t)/EAP(k)/EAP(h)/EAP(l) DEF(c) JD/HW

ACC NR: AR6009959

SOURCE CODE: UR/0137/65/000/012/D044/D044

AUTHOR: Makarov, I. P.

TITLE: Introduction of tube reduction with pull at the Novosibirsk Metallurgical Plant

SOURCE: Ref. zh. Metallurgiya, Abs. 12D331

REF SOURCE: Sb. Materialy Konferentsii po teorii i praktike redutsir. trub. Sverdlovsk, 1965, 144-154

TOPIC TAGS: metal rolling, metal tube, rolling mill, mathematic analysis

ABSTRACT: The principal technological parameters in the reduction of tubes include: change in the wall thickness of tube; reduction of tube; rate of advance of tube into reduction mill; extent of pull; rate of emergence of tube from mill or the ability of the reduction mill to assure a specified reduction of tube; extent of pull required to obtain the desired reduction of tube. On examining in detail the kinematics of the drive of a reduction mill where the main drive serves to assure tube deformation over the diameter and has an adjustable number of revolutions  $n_m = 500-1000$  r. p. m. while the auxiliary drive serves to assure the reduction in tube wall thickness,  $n_a = 120-1500$  r. p. m., and where the first two stands are driven from the

Card 1/2

UDC: 621.774.35.005

ACC NR: AR6009' 59

main motor without differential transmission, the author carries out a thorough mathematical analysis of the operating conditions of the reduction mill and presents a graph method of calculating the regimes of operating speeds of the reduction mill. Further, the author presents nomograms for determining the parameters of the auxiliary motor of a reduction mill with a differential reducing gear. 9 illustrations. I. Kul'bachnyy. [Translation of abstract]

SUB CODE: 13, 11

Card 2/2 of





MAKAROV, I.S.

Boundary effect of a magnetic recording head. Radiotekhnika 18  
no.7:66-72 J1 '63. (MIRA 16:10)

1. Deystvitel'nyy chlen Nauchno-tehnicheskogo obshchestva  
radiotekhniki i elektrosvyazi im. A.S.Popova.

MAKAROV, I.S.

Detection of coded signals recorded on a magnetic carrier.  
Radiotekhnika 18 no.11:50-56 N '63. (MIRA 10:12)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva  
radiotekhniki i elektrosvyazi imeni Popova.

L 5150-66 EWT(1)/EWP(=)/EWT(=) JD

ACCESSION NR: AP8020841

UR/0170/65/009/002/0180/C186  
532.522

AUTHOR: <sup>44,55</sup> Makarev, I. S.; <sup>44,55</sup> Khudenko, B. G.

69  
66  
B

TITLE: A system of plane turbulent jets

SOURCE: Mashinerno-fizicheskiy zhurnal, v. 9, no. 2, 1965, 180-186

TOPIC TAGS: gas flow, turbulent flow, turbulent jet, turbulent mixing, carbon dioxide, jet flow, nozzle flow, heat transfer coefficient, heat transfer

ABSTRACT: The paper gives the results of investigations of the mixing of five plane turbulent air jets, flowing out into the atmosphere from slit nozzles (see Fig. 1 of the Enclosure). Identical slits (6 x 30 mm) were placed equidistant from each other (30 mm). The flow rate, temperature, concentration of carbon dioxide, and the direction of flow at various distances from the nozzle cuts (up to 350 mm) were investigated in the resultant flow. The air being fed into nozzles 2 and 4 was heated to a maximum of 80C. It is found that heat exchange in the jet begins long before the boundaries of the individual jets intersect. After the mixing of the jets (cross section - 52 mm) the temperature changes monotonically from Card 1/3

090/0034

L 5150-66

ACCESSION NR: AP5020941

ASSOCIATION: Aviatstomyy Institut im. Sergo Ordzhonikidze, Moscow (Aviation Institute)

SUBMITTED: 27 Oct 84

ENCL: 01

SUB CODE: ME, TJ

NO REF SOV: 000

OTHER: 000

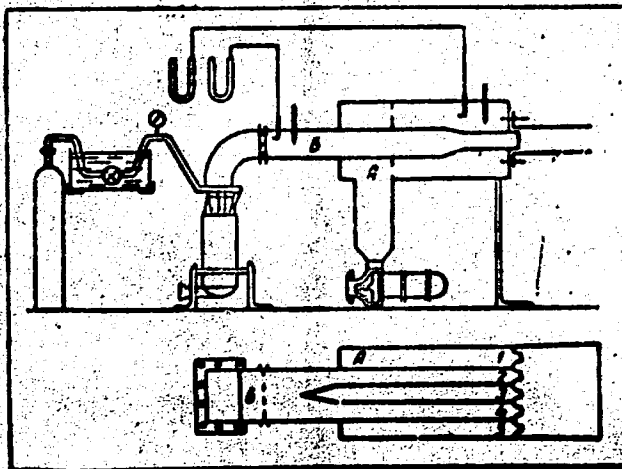
L 5150-66

ACCESSION NR: AP5020941

ENCLOSURE: 01

maximum to minimum. Quantitative processing of the experimental data shows a total analogy in the processes of heat exchange and mass exchange in the system of jets. The differences noted in the characteristics of the individual jets are presented and discussed. Orig. art. has: 4 figures and 1 table.

Fig. 1  
Schematic of the  
experimental device.  
(A and B are  
reservoirs; 1, 2, 3,  
4, 5 are jets)



Card 3/3 md

L 32185-66 EWP(m)/EWT(1)/EWT(m) WW/JW

ACC NR: AP6010859

SOURCE CODE: UR/0421/66/000/001/0154/0158

AUTHOR: Abramovich, G. N. (Moscow); Bakulev, V. I. (Moscow); Makarov, I. S. (Moscow); Khudenko, B. G. (Moscow)

ORG: none

75  
B

TITLE: Investigation of a submerged turbulent stream of real gas

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 1, 1966, 154-158

TOPIC TAGS: axisymmetric flow, turbulent flow, real gas, gaseous substance, Prandtl number, nitrogen, LIQUID NITROGEN, CRITICAL PRESSURE

ABSTRACT: The results of the experimental investigation of the axisymmetric flow of liquid nitrogen at supercritical pressure in gaseous nitrogen are presented. The observation of the flow with ordinary and shadowgraph cameras indicates that the liquid flow is distinguished by the absence of droplets at the boundary layer, due to vanishing surface tension at supercritical pressure. The conditions of the experiment and the apparatus used are described (the Reynolds number at the exit nozzle was in the range of 1.7 to  $5.8 \cdot 10^5$ ). The kinetic pressure and temperature profiles were measured at upper and mid-stream sections of the flow and the data are compared with the theoretical computations. The Prandtl turbulence number was so chosen that a phenomenological constant employed in the comparison of the results was about the same for the

Card 1/2

L 32185-66

ACC NR: AP6010859

kinetic and thermal profiles. It was found that under these conditions two density regimes were formed in the stream and the relative width of the cold nitrogen stream is smaller than the isothermal stream. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 10Mar65/ ORIG REF: 003

Card 2/2



L 29331-66 EWP(m)/ENT(d)/ENT(l)/ENT(m)/I-2/EWP(f) WW/JW

ACC NR: AP6017839

SOURCE CODE: UR/0147/66/000/002/0137/0142

AUTHOR: Zhukova, L. A.; Makarov, I. S.; Khudenko, B. G.

ORG: none

TITLE: Mixing of gas jets at the wall

SOURCE: IVUZ. Aviatzionnaya tekhnika, no. 2, 1966, 137-142

TOPIC TAGS: rocket engine, gas dynamics jet, jet mixing

ABSTRACT: The mixing of gas jets is of great importance in the operation of reaction engines. This problem has been studied experimentally and a method was proposed for the approximate calculation of the velocity fields of the resulting gas jet. The test assembly consisted of a square duct with three uniformly spaced nozzles located in a plane parallel to the wall and one nozzle located at a greater distance from the wall but symmetrically with respect to the three nozzles. The total pressures of the jets near the wall and the velocities were measured as a function of distance from the nozzle outlets. The experiments were conducted at discharge velocities of 30, 50, and 80 m/sec, which were equal for all four nozzles. An interesting result was that the axial velocities of the jets changed with distance at different rates, although the discharge velocities, flow rate, nozzle size, and total momentum

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UDC: 533.17

L 29331-66

ACC NR: AP6017839

0  
were equal for all four jets. Formulas for the axial and radial velocity profiles and for the velocity of the resulting flow were developed. Orig. art. has: 3 formulas and 7 figures.

[PV]

SUB CODE: 21/ SUBM DATE: 19 pr 65/ ORIG REF: 003/ OTH REF: 002/ ATD PRESS: 5010

Card 2/2 CL

ACC NR: AP6018906

SOURCE CODE: UR/0170/66/010/006/0707/0711

AUTHOR: Makarov, I. S.; Khudenko, B. G.

ORG: Aviation Institute im. S. Ordzhonikidze, Moscow (Aviatsionnyy institut)

TITLE: A system of flat turbulent jets in a chamber

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 6, 1966, 707-711

TOPIC TAGS: turbulent jet, test chamber, flow structure

ABSTRACT: The results of experimental investigations of the turbulent jets in a chamber reveal the same specific peculiarities of net flow as in infinite space: deformation of jet axes while mixing, the presence of extended and intense regions of back currents, etc. However, all these phenomena are intensified in the chamber. There is a possibility of affecting the structure of the net flow, decreasing its nonuniformity, and diminishing hydraulic losses in the chamber by changing the dimensions of lateral jets. Orig. art. has: 4 figures and 1 table. [Based on authors' abstract]

[NT]

SUB CODE: 20/ SUBM DATE: 16Dec65/ ORIG REF: 002/

Card 1/1

UDC: 532.517.4

20598

26 2135  
10 2000

S/147/61/000/001/007/016  
E022/E135

AUTHORS: Abramovich, G.N., Makarov, I.S., and Khudenko, B.G

TITLE: Turbulent Wake Behind Aerodynamically Poor (Blunt)  
Bodies in a Bounded Stream

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,  
Aviatsionnaya tekhnika, 1961, No. 1, pp. 61-73

TEXT: The theoretical solution of the processes taking place behind the flame stabilisers (intensity of burning of the mixture etc.) could appreciably ease the problem of designing highly efficient combustion chambers. However, the difficulties in obtaining such theoretical solutions are very great, mainly due to the fact that certain elementary processes of combustion are still not fully understood. In particular, the laws governing the flow of gases immediately behind the blunt bodies are still lacking, in spite of the fact that that region affects very strongly the process of combustion as well as the stability of the flame. The present article presents some experimental investigations of the structure of the turbulent wake behind blunt bodies of different form, placed in a bounded stream and causing blockage

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S/147/61/000/001/007/016  
E022/E135

**Turbulent Wake Behind Aerodynamically Poor (Blunt) Bodies in a Bounded Stream**

of 14% of the cross-sectional area under the conditions approximating to those in the combustion chamber. The shapes investigated are shown in Fig.1, and the object of the experiments was to determine total pressure, static pressure, and the direction of flow over the whole wake caused by these bodies. The tunnel used for the experiments was of the straight-through type closed working section, and two-dimensional flow was simulated in it. The contraction section was designed according to the method of Witoszynski. The working section dimensions were 0.2 x 0.6 x 2 m. The measurements were taken always at the same station while the model was moved along the wind tunnel. The direction of flow (inclination of the stream lines) was measured by means of a three-tube-in-one probe, the probe inclination being adjusted until the side tubes read the same pressure, the middle top tube being used for a rough estimation of the total pressure at a given point. The exact value of the total pressure was then measured by means of a separate probe

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aligned in the direction of the flow. The static pressure was measured by means of a probe with three holes equally spaced along its periphery. It was found that this type of probe was the most accurate. Pressures were read from the manometers. The drag of a body has a substantial influence on the shape of the wake behind the body. Direct measurement of the drag in an enclosed stream is not easy, and for this reason in the present experiments drag was measured by the Jones method (Refs 1, 2). The wake boundaries were taken as the lines where the total pressure in the wake was equal to the total pressure in the undisturbed stream. Experimental data were used to evaluate the specific axial component of velocity

$$\bar{u} = \sqrt{\bar{p}_{dyn.}} \sin \alpha$$

$\bar{p}_{dyn.}$  being the specific dynamic pressure of the flow (measured dynamic pressure referred to undisturbed flow dynamic pressure). The thickness of the wake was characterised by the transverse

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S/147/61/000/001/007/016  
E022/E135

Turbulent Wake Behind Aerodynamically Poor (Blunt) Bodies in a Bounded Stream

coordinate  $y_0$ , where  $\bar{u} = \bar{u}_0 = \frac{\bar{u}_{\max} + \bar{u}_{\min}}{2}$

From the experiments it was found that the characteristics of the wakes behind all the bodies examined were qualitatively similar. The authors distinguish two parts of the wake, the initial and the fundamental. In the initial portion the wake is developing; in the fundamental it remains almost unchanged. The velocity changes within the wake are expressed by a function

$$F = \frac{\bar{u}_{\max} - \bar{u}}{\bar{u}_{\max} - \bar{u}_m}$$

(in which  $\bar{u}_m$  represents the velocity along the central line of the flow), and Figs. 6 and 7 show its distribution for all the bodies investigated. Fig. 6 refers to the fundamental portion of the wake, and Fig 7 to the initial portion. It will be seen from these figures that the character of the function F is

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**Turbulent Wake Behind Aerodynamically Poor (Blunt) Bodies in a Bounded Stream**

essentially the same for all the bodies, irrespective of the shape of the body and the percentage of blockage of the flow. Thus the authors conclude that this function is the universal function of the wake. Theoretical computations were carried out to evaluate the function  $F$  for the case of incompressible fluid. Two different approaches were employed: 1) the "old" theory of Prandtl' (Prandtl'—Schlichting theory) and 2) the "new" theory of Prandtl'. These computational values of  $F$  are also shown in Fig.6, the first as a solid line and the second as a dotted line. As can be seen, both the theoretical solutions agree very well with the experimental data. Once the function  $F$  is known and the experimental data for  $y_{0.1}$  and  $y_{0.9}$  are obtained, the thickness of the core  $\delta_q$ , the thickness of the boundary layer  $\delta$  and the total thickness of the wake  $\delta_{\Sigma}$  can be deduced from the old Prandtl' theory (see Ref.3), as follows

$$\delta = 1.569(y_{0.1} - y_{0.9}), \quad \delta_q = y_{0.9} - 0.136\delta, \quad \delta_{\Sigma} = \delta_q + \delta.$$

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$$y_{0.5} = \delta_A + 0.441\delta$$

(At  $\bar{y} = \bar{y}_{0.1}$  there is  $F = 0.1$  and at  $\bar{y} = \bar{y}_{0.9}$ ,  $F = 0.9$ , etc.). In Figs. 6 and 7  $F$  is given as a function of  $\eta = \bar{y}/\bar{y}_{0.5}$  in the case of the fundamental portion of the wake, and  $\eta = (\bar{y} - \bar{y}_{0.9})/(\bar{y}_{0.1} - \bar{y}_{0.9})$  in the case of the initial portion of the wake. Fig. 8 shows the experimental values of  $\bar{y}_{0.5}$  compared with the theoretical relation  $\bar{y}_{0.5} - \delta_A = 0.441\delta$  for the plate of different sizes and for the other blunt bodies. It can be seen from the graphs in Fig. 8 that in the initial portion of the wake the variation of  $\bar{y}_{0.5}$  is of a complex nature and is different for different bodies, being somewhat smoother for the wedge and half-body than for the flat plate. Fig. 9 shows the growth of the thickness of the boundary layer in the wake. It can be seen that the boundary layer increases uniformly and has the same character for all the different bodies tested. As the boundary layer grows along the wake, the total thickness of the wake must also grow at Card 6/13

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S/147/61/000/001/007/016  
E022/E135

**Turbulent Wake Behind Aerodynamically Poor (Blunt) Bodies in a Bounded Stream**

first. But the difference in static pressure in the potential flow outside the wake and that in the wake forces the flow back towards the central line and therefore the wake begins to narrow irrespective of the fact that the boundary layer grows still further. Eventually the boundary layers formed at the shoulders of the body meet at the centre of the wake and henceforth the motion of the fluid in the wake is governed by entirely new conditions.

There are 9 figures and 5 references: 4 Soviet and 1 German.

ASSOCIATION: Kafedra 201, Moskovskiy aviatsionnyy institut  
(Department 201, Moscow Aviation Institute)

SUBMITTED: August 8, 1960

Card 7/13

MAKAROV, I. T.; KORNEV, I. V.

Reducing noise in textile factories. Tekst.prom. 20 no.9:77-79  
S '60. (NIEA 13:10)

(Textile machinery—Noise)

101, 111

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... ..

11 MAKAROV  
PANOV, N.A., prof.; MAKAROV, I.V., kand.med.nauk

Automatic switch for roentgen apparatus for receiving films of the chest at a specific phase of respiration. Vest.rentg. i rad.  
33 no.1:76-77 Ja-F '58. (MIRA 11:4)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo instituta (dir.-kand.med.nauk V.N. Karachevtseva) Ministerstva zdavookhraneniya RSFSR.

(THORAX, radiography

automatic switch for receiving films in specific phase of resp. (Rus)

KAGANOV, S.Yu.; MIZERNITSKAYA, O.N.; MAKAROV, I.V.

Review of S.G. Zviagintseva's "Bronchial asthma in children." *Pediatrics* 37 no.10:90-91 O '59. (MIRA 13:2)  
(ASTHMA) (ZVIAGINTSEVA, S.G.)

MAKAROV, I.V., kand.med.nauk

Use of anesthetic solutions in bronchography in children. Vest.  
rent. i rad. 35 no. 6:71-72 N-D '60. (MIRA 14:2)

1. Iz rentgenovskogo otdeleniya (nauchnyy rukovoditel' - prof.  
N.A. Panov) Gosudarstvennogo nauchno-issledovatel'skogo  
pediatricheskogo instituta (direktor - doktor med. nauk A.P.  
Chernikova) Ministerstva zdavookhraneniya RSFSR.  
(BRONCHI—RADIOGRAPHY)

KAGANOV, S.Yu.; MAKARGOV, I.Y.; PEDANOVA, V.M.

Significance of congenital bronchopulmonary cysts in the  
development and course of chronic pneumonia in children.  
Pediatrics 41 no.9:77-81 S '62. (MIRA 15:12)

1. Iz kliniki dlya detey starshego vozrasta (zav. S.Yu.Kaganov)  
i rentgenologicheskogo otdela (zav. - prof. N.A.Panov) Nauchno-  
issledovatel'skogo pediatricheskogo instituta (dir. - kand.med.  
nauk V.P.Spirina) Ministerstva zdravookhraneniya RSFSR.  
(PNEUMONIA) (CYSTS)



M. R. N., " "

dr. ... ..

**Nov 10 1968**

8;

Nov 5 1960

ACCESSION NR: AP4040016

S/0288/64/000/001/0101/0105

AUTHOR: Makarov, I. V.

TITLE: Simplified method of plotting rock strength curves

SOURCE: AN SSSR. Sib. otd. Izv. Seriya tekhnicheskikh nauk, no. 1, 1964, 101-105

TOPIC TAGS: rock strength, brittle material, brittle material strength

ABSTRACT: The border envelope of Moore's circles is represented as a piecewise-smooth curve consisting of (a) a straight line parallel to  $O\sigma$ -axis in the region of high compression, (b) a convex curve, near the origin of coordinates, and (c) a concave curve, in the region of omnidirectional tension. The validity of such representation is theoretically proven. The principal strength characteristics of "brittle" materials can be determined from the data of three experiments (e.g., oblique shear). A method for determining the stress

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ACCESSION NR: AP4040016

corresponding to a plastic flow of "brittle" material is offered. Orig. art. has:  
4 figures, 12 formulas, and 2 tables.

ASSOCIATION: SibGIPROGORMASH (Siberian Branch,  
Designing Mining Machinery)

State Institute for

SUBMITTED: 28Apr63

DATE ACQ: 18Jun64

ENCL: 00

SUB CODE: MT

NO REF SOV: 008

OTHER: 000

Card 2/2

MAKAROV, I.V.

Friction of packing cups. Stan. 1 instr. 26 no.12:18-20 D '55.  
(Friction) (Packing (Mechanical engineering)) (MLRA 9:2)

MAKAROV, I.V.

Method for analyzing the efficiency of tunneling operations. Izv.  
Sib.otd.AN SSSR. no.4:22-28 '59. (AIR 12:10)

1. "Giprouglenash", Kuznetskiy filial.  
(Tunneling)

MAKAROV, I.V.; SHPARBERG, Ye.M.

New machinery for hydraulic haulage. Ugol' 34 no.11:29-30 N '50  
(MIRA 13:3)

1. Kuznetskiy filial Giproglemsha.  
(Hydraulic machinery) (Mine haulage)

GAL'PERIN, A.I., kand.tekhn.nauk; NIKOL'ENKO, V.F., inzh.; MAKAROV,  
I.V., inzh.

Standard series of pipe-transporting machines. Stroi. truboprov.  
6 no.6:6-10 Je '61. (MIRA 14:7)

(Truck trailers)  
(Pipe-transportation)

MAKAROV, I.V.

Automotive transportation in construction of the Gazli-Ural gas  
pipeline. Stroi. truboprov. 6 no.9:3-4 S '61. (MIRA 14:9)  
(Transportation, Automotive) (Gas, Natural--Pipelines)



MAKAROV, I.V., inzh.; MAZHINSKIY, I.S., inzh.

Machine for cleaning mine railroad tracks. Ugol' 36 no.4:34-35  
Ap '61. (MIRA 14:5)

1. Sibgiprogormash.  
(Mine railroads—Equipment and supplies)

GAL'PERIN, Abram Isayevich; MAKAROV, Ivan Vasil'yevich; NIKOLENKO, Viktor Filippovich; SVYATITSKAYA, K.P., ved. red.; VORONOVA, V.V., tekhn. red.

[Vehicles for transporting pipes and pipe sections] Mashiny dlia perevozki trub i pletei. Moskva, Gostoptekhnizdat, 1962. 115 p.

(Pipe--Transportation)

(MIRA 15:10)

SHTER, B.O.; KONDRAT'YEV, N.P.; LESNIKOVA, Ye.S.; MAKAROV, I.V.;  
CHERNYSHOVA, T.Ye.; SOLGANIK, G.Ya., ved. red.; FEDOTOVA, I. G.,  
tekhn. red.

[Operation and repair of transportation and hoisting machinery  
of the petroleum and gas industry] Eksploatatsiya i remont trans-  
portnykh sredstv i pod'emnykh mashin neftianoi i gazovoi pro-  
myshlennosti; spravochnik. Moskva, Gostoptekhizdat, 1962. 396 p.  
(MIRA 15:7)

(Gas, Natural--Transportation) (Petroleum--Transportation)

MAKAROV, I.V., inzh.

Approximate rate determination in rotary-percussion drilling. Ger.  
zhur. no.3:48-50 Mr '62. (MIRA 15:7)

1. Institut Sibriprogormash, Novosibirsk.  
(Boring)

MAKAROV, I. V., inzh.

Elemental analysis of drilling with a roller bit. Ger. zhur.  
no.11:41-45 N '62. (MIRA 15:10)

1. Sigiprogormash, Novosibirsk.

(Boring)

GAL'PERIN, A., kand.tekhn.nauk; NIKOLENKO, V., inzh.; MAKAROV, I., inzh.

Operation of motor vehicles in sandy-desert regions. Avt.  
transp. 40 no.5:24-26 My '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po  
stroitel'stva magistral'nykh truboprovodov i Glavnoye  
upravleniye gazovoy promyshlennosti SSSR.  
(Transportation, Automotive)

MAKAROV, I.V.

Simplified rating of the strength of rocks. Izv. AN SSSR  
no.2. Ser. tekhn. nauk no.1:101-105 '64. (MirA 17:8)

1. Sibirskiy gosudarstvennyy proyektno-konstruktorskiy  
eksperimental'nyy institut gornogo mashinostroyeniya, Novo-  
sibirsk.

MAKAROV, I.V.

Building winter roads in the areas of petroleum and gas  
fields of Tyumen' Province. Stroi. truboprov. 10 no.8:10-12  
Ag '65. (MIRA 18:11)



TURAYEV, M.S., dotsent, red.; MAKAROV, I.Ye., kand.tekhn.nauk, dotsent;  
SARAFANNIKOVA, G.A., tekhn.red.

[Improvement of agricultural machinery; a collection of articles]  
Sovershenstvovanie sel'skokhoziaistvennoi tekhniki; sbornik statei.  
Pod red. M.S. Turayeva. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit.  
lit-ry. Vol.2. 1957. 149 p. (MIRA 12:3)

1. Sverdlovsk. Sel'skokhozyaystvennyy institut.  
(Agricultural machinery)

L 07153-67 EWT(1) SCTB DD

ACC NR: AN7001057

SOURCE CODE: UR/9012/66/000/247/0006/0006

AUTHOR: Makarov, K.; Polesskiy, M.

ORG: none

14

13

TITLE: Black Sea experiment

SOURCE: Pravda, 04 Sep 66, p. 6, col. 7-8

TOPIC TAGS: oceanography, oceanographic research facility

ABSTRACT: Somewhat more information is given on the experiences of underwater dwellers in the Black Sea in the small "house" set up beneath its waters by the sportsmen of the "Ikhtiandr" club in Donetsk. The principal objective of the experiment is to clarify the ability of man to withstand the increased pressures prevailing beneath the sea surface over an extended time. The "house", called "Ikhtiandr-66", at a depth of 11 meters, measures two meters in length, one and one-half meters in width and two meters in height. It sits on thick reinforced concrete pilings and is securely attached to them. The house is connected to the surface by telephone. Each man is allotted a daily ration of 5,000 calories. The residents go outside from time to time for exercise. The first day the house was occupied by only one man; on the second day he was joined by another. They stayed underwater for one week and

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L 07153-67

ACC NR: AN7001057

abandoned their residence only after a storm developed; however, no damage was inflicted on the structure by the storm. The work program was completed but the collected data have not yet been analyzed.

[JPRS: 38,236]

SUB CODE: 08 / SUBM DATE: none

Card 2/2 m<sup>2</sup>e

ACCESSION NO. 1829-1831

AUTHOR: Bondarenko, V. M.; Nikolayev, A. F.; Makarov, E. A.

TITLE: Coordination polymers based on poly-N-salicylidenevinylamine

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 10, 1964, 1829-1831

TOPIC TAGS: coordination polymer, chelate polymer, polysalicylidenevinylamine

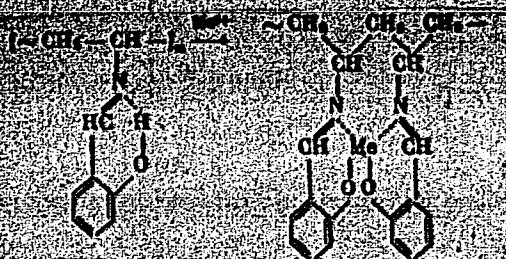
ABSTRACT: Communication 2 of the series "Polyvinylamine and its derivatives" reports the synthesis and properties of 5 coordination polymers based on poly-N-salicylidenevinylamine (I). The coordination polymers were prepared by reacting solutions of I in dimethylformamide

polymers based on poly-N-salicylidenevinylamine (I). The coordination polymers were prepared by reacting solutions of I in dimethylformamide and acetates of divalent metals with coordination number 4 (Cu, Fe, Co, Ni, and Zn) in stoichiometric ratio:

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ACCESSION NO. AP4007211



The coordination polymers were amorphous colored powders insoluble in the common solvents, except the Cu- or Ni-containing polymers, which were soluble in dimethylsulfoxide. They softened above 250, and their weight loss after 2 hr at 250C in air was 5-10%. Their thermal sta-

bility depended on the metal present, decreasing in the order:



Orig. att. has: 1 figure, 1 table, and 1 formula.

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L 12004-65

ACCESSION NR: AP4047211

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lenoventa  
(Leningrad Technological Institute)

SUBMITTED: 09Dec63

ATD PRESS: 3120

ENCL: 00

SUB CODE: CC

NO REF SOV: 007

OTHER: 004

Card 3/3



MAKAROV, K.A.

Apparatus for studying energy and angular scattering of electrons  
in a solid. Prib. i tekhn. eksp. 9 no.6:100-113 N-1 1964. (MIRA 18:3

1. Leningradskiy institut tochnoy mekhaniki i optiki.